

Original Article

Gender Differences in Perceived Stress and Mental Health

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Abstract

Objective: To investigate the gender differences in perceived stress and mental health in medical students of Lahore, Pakistan.

Methodology: The current study was cross-sectional in nature conducted at two private medical colleges in Lahore. Data was collected using stratified random sampling. Sample size was 300 (150 males & 150 females) students selected from all five years of two medical colleges. For assessment purpose Demographic form, Perceived Stress Scale for Medical Students (PSSMS) for stress assessment and Depression Anxiety Stress Scale (DASS-21) for mental health evaluation were used.

Results: For statistical analysis descriptive statistics was used for demographics details and from inferential statistics t-test was used for a clear picture of gender differences in perceived stress and mental health issues. Results revealed that in PSSMS scale only one subscale of burnout showed significant differences ($p=.001$) which revealed that males were more burnout than females. Significant gender differences were found for DASS Total ($p=.007$), and its subscale of Stress ($p=.000$), and Depression ($p=.004$).

Conclusion: Our findings revealed that females demonstrate high level of stress, depression and on the whole more mental health issues than their male counterparts. On the other hand in Perceived Stress Scale for Medical Students (PSSMS) there were no significant differences in dimensions of social stressors, academic stressors and mistrust. Burnout was only one dimension in which male showed high burnout than female students. Gender appeared to influence the mental health of students.

Keywords: Perceived Stress, Mental Health, Gender Difference, Medical Students

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Introduction

Gender is that aspect which is frequently discussed in the domain of health and disease. In biological sciences, mostly focus is on the role of gender on some specific disease and in social sciences, focus is mostly on the effect of gender norms and our responses to different ailments.^{1,2} Multiple research works encompass the gender

differences in multiple domains of social sciences. Effect of cultural norms and gender roles restrictions in Pakistani collectivistic culture might play a very crucial role in our responses towards stress and their psychological effects.

Some professions carry a unique set of state of affairs that present more stress levels than other professions. Most of literature relates stress to medical profession because it is observed that along with the laurels of a respected and promising career, medical education brings along apparently endless sequence of frequent examinations, strict clinical rotations schedules, vast course compacted in short duration which results in stress and other mental health issues.^{3,4} Stress is natural physiological phenomenon that shields human beings from danger. Moderate level of stress is positive which promotes creativity but prolong and intense pressures may lead to dysfunctioning in social, academic and personal domains of medical student.^{3,5} Lots of Challenges in medical education result in reduced life contentment among medical students. All these stressors and high academic demands leads to life style changes like decrease physical activity, no leisure time for personal and recreational activities and sleep deficiency which has negative influence on the physical and mental health of students.

Mounting evidence suggests that males and females are stressed by different types of situations and respond differently to different challenges of life. Although increased attention being given to exploration of stressors that contribute to the decrease in the mental health of the medical students. Lot of research literature that highlight the influence of gender on stress and other mental health issues like anxiety and depression among medical students as some studies revealed that female students have high depression level than their male counterparts.⁶

Other studies do not disclose any gender differences.^{7,8}

Previous studies in Pakistan have shown higher prevalence of anxiety and depression in medical students as research findings of Azad and colleagues⁹ revealed that female students had higher depression especially in final years. High prevalence of anxiety among female have been reported by the research findings by Alvi and colleagues¹⁰ Similar pattern of findings have been high lightened by other studies.^{11,12}

The present study aims to explore the gender differences not only in perception of stressors but also mental health issues like anxiety and depression in medical undergraduate students. We hypothesized that female medical students will perceive more stressors, anxiety and depression than their male counterparts.

Methodology

The current study is cross-sectional in nature which encompasses five years of medical students of two private sector medical colleges of Lahore. The study was conducted during Oct 2019 to Feb 2020. The sample size was based on the assertion made by Kline (2013)¹³ that indicated the ratio of sample must be at least 3:1 for the number of the items of scale. The sample was selected through the stratified random sampling techniques which is probability sampling. The strata were made on the basis of variable of gender. The inclusion criteria encompass that age range was between 20 to 25 years. Only medical students (MBBS) were part of study. The sample comprises of 300 participants, 60 (30 males & 30 females) from each year of two private medical colleges of Lahore. The age range of sample was between 20 to 25 years. The duration of study was from Oct 2019 to Feb 2020.

An anonymous self-administered questionnaire covering basic demographic factors like age, gender, education year, birth order, residence, and their

monthly income was used.

Perceived Stressors in medical students were measured by the Perceived Stress Scale for Medical Students (PSSMS; Mansoor, 2019) 14 through four sub scales of Social Stressors, Mistrust, Academic Stressors, and Burnout. Scale was coded with likert scale of five choices from “strongly disagree” to “strongly agree. Cronbach's alpha for the (PSSM) items was 0.89. Construct validity was supported through significant positive correlations with the Perceived Stress Scale (PSS) and Medical Students Stress Scale (MSSS). The details of these four sub-scales are given below:

- i. Social Stressors: The first factor labeled as “social stressors” because There are 13 items which describe interpersonal issues, social media issues, inferiority complex regarding social comparisons, and fear of negative evaluation from others.
- ii. Mistrust: The 10 items in this subscale assess mistrust relevant to social group, faculty, authorities of institute, and examination system.
- iii. Academic Stressors: The 10 items describe the stressors relevant to curriculum, frequent examinations, academic competition, fear of low grades, attendance deficiency, lack of time for personal life, uncertainty about future job and scope.
- iv. Burnout: The 7 items in this subscale evaluate tendencies of burnout in medical students, including lack of interest in their professional field, use of passive coping strategies like drugs, uselessness of life, religion and medical profession.

The DASS is a clinical assessment tool that measures the depression, anxiety and stress. DASS was developed by University of New South Wales in Australia by Lovibond & Lovibond (1995)¹⁵. The DASS-21 was found to be reliable, valid and easy to administer. The reliability of DASS-21 showed that it has excellent Cronbach's alpha values of 0.81, 0.89 and 0.78 for

the subscales of depressive, anxiety and stress respectively. It has 21 questions and time required for its completion is approximately three minutes. It has 4 point likert scale ranging from 0 to 3, the 0 means client believed the item “did not apply to me at all” and for 3 clients believed that item “applied to me very much, or most of the time”.

The sample was collected from two private medical colleges from the city of Lahore. Informed consent was obtained from the authorities of these educational institutes and later consent was obtained from the participants on the individual level during data collection. The demographic form, PSSMS, and DASS-21 were administered individually on medical students of all five years. Data was analyzed using Statistical Package for Social sciences (SPSS, version 19.0). The descriptive statistics and t-test was used for assessment of gender differences in perceived stressors and mental health issues comprising anxiety, stress, and depression.

Results

The results of the study are summarized in T1.

Table 1: Gender Differences on PSSMS, DASS-21, and SBQ scores

		Groups	N	M	SD	t	df	p						
PSSMS	Social Stressors	Males	150	34.84	9.23	.471	298	.638						
		Females	150	34.36	9.63									
	Mistrust	Males	150	35.75	6.75				-.711	298	.478			
		Females	150	36.35	7.82									
Academic Stressors	Males	150	33.19	7.59	-.440	298	.660							
	Females	150	33.59	8.13										
Burnout	Males	150	18.04	5.52				3.23	298	.001				
	Females	150	16.06	5.07										
Total	Males	150	121.8	22.30	.569	298	.570							
	Females	150	120.3	23.15										
DASS	Stress	Males	150	7.58				4.72	-4.06	298	.000			
		Females	150	9.96				5.36						
	Anxiety	Males	150	7.15	4.74	-1.34	298	.179						
		Females	150	9.96	5.43									
	Depression	Males	150	7.25	5.24							-2.91	298	.004
		Females	150	9.18	6.18									
Total DASS	Males	150	44.40	27.47	-2.73				298	.007				
	Females	150	53.48	29.96										

Discussion
This study highlights

ights the gender differences in the perception of stressors and how these stressors lead towards the mental health issues. Findings of current study revealed significantly high level of burnout (sub-scale of PSSMS) in males as compared to their female counterparts. Dunn and colleagues (2008)¹⁴ research revealed that female students mostly have good social support and they also displayed clear choices about life priorities. Similar pattern of results have been reported from India by Sawant and Mishra (2015)³ that females used more coping skills and seek social support like emotional support from family and friends and seeking advice from friends to handle the stressful situations in their lives. This social and emotional support play a crucial role as buffer against burnout in females. However, on other subscales of academic stressors, social stressors and mistrust the differences are not statistically significant. So these findings revealed that gender was not important factor in stress reporting on the whole, stressors reported by both genders were almost similar in their mean numbers. Absence of gender difference in stressors which are mostly relevant to their college environment and medical education may imitate the contemporary variations in medical schools in Pakistan. Globalization to western culture have maneuvered this Islamic country with substitute gender ideologies. One of the other factors that might be responsible for lack of gender differences is highly selected homogenous population with distinctive characteristics preferred for competitive milieu of medical colleges.^{6,17,18}

In the current study subscales of DASS-21 highlights significant differences in two subscales including total scores of DASS-21. Females showed higher level of depression and stress than their male counterparts. Although social support is protective factor in females but preoccupation with many social roles and responsibilities outside the college life is the reason for deficiency in their energy level and time

which is crucial for their learning and resting, which could be the cause for greater distress among females.¹⁴

In developing countries women are more vulnerable for mental health issues.¹⁹ Similar pattern of findings were revealed by other research work on Swedish and Iranian medical students.^{20,21,22} The research literature in Pakistan showed that medical students are vulnerable population that has a high prevalence of anxiety and depression especially in female medical students.^{9,10,23,24}

Conclusion

Although presented paper revealed that on the whole there were no gender differences in perception of stressors which are mostly relevant to their educational life but gender differences regarding their mental health issues are quite perceptible. Female students comparatively showed high level of mental health issues like general stress and depression than male medical students. Although there are no gender differences but stressors are perceived by both genders regarding their academic life, social life and interaction to authorities including teachers and administration. These findings highlighted the need for creating awareness about mental health amongst students and teachers encouraging medical students to seek help for mental health issues and providing adequate amenities in this aspect.

Conflict of Interest

None

Funding Source

None

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Authors Contribution

I.M.: Conception and design statistical expertise

M.A.: Critical revision, final approval

K.T.K.: Collection and interpretation